Montana Board of Oil and Gas Conservation
Environmental Assessment

Operator: G/S Producing
Well Name/Number: Weil #1
Location: NW SE Section 28 T34N R9E
County: Hill **, MT; Field (or Wildcat)** Wildcat (Within Rudyard Field)

Air Quality

(possible concerns)
Long drilling time: No, 15 to 20 days drilling time.
Unusually deep drilling (high horsepower rig): No, single or double drilling rig to drill to 5400' TD, Red River Formation vertical well test.
Possible H2S gas production: Possible H2S from the Mississippian through to Ordovician Formations.
In/near Class I air quality area: No Class I air quality area in the area of review.
Air quality permit for flaring/venting (if productive Yes, DEQ air quality permit required under 75-2-211.

Mitigation:
__ Air quality permit (AQB review)
__ Gas plants/pipelines available for sour gas
__ Special equipment/procedures requirements
__ Other:_____

Comments: No special concerns – using a single or double drilling rig to drill to 5400' TD, Red River Formation vertical well test.

Water Quality

(possible concerns)
Salt/oil based mud: No, freshwater and freshwater mud system.
High water table: No high water table in the area of review.
Surface drainage leads to live water: No, closest drainage is an ephemeral tributary drainage, Dry Lake Coulee, about 3/8 of a mile to the northeast from this location.
Water well contamination: No, no water wells nearby. Closest water wells are about 1//2 mile to the north northeast and about ¾ of a mile to the northeast from this location. Depth of these water wells range from 18' to 155'. Surface hole will be drilled with freshwater and surface casing set to 300' and cemented to surface.
Porous/permeable soils: No, sandy bentonitic soils.
Class I stream drainage: No

Mitigation:
___ Lined reserve pit
_X_ Adequate surface casing
__ Berms/dykes, re-routed drainage
__ Closed mud system
_X_ Off-site disposal of solids/liquids (in approved facility)
__ Other: _____

Comments: 300' of surface casing cemented to surface adequate to protect freshwater zones. Also, fresh water mud systems to be used. Drilling fluids and drill cuttings will be disposed of offsite on another surface owners land.

Soils/Vegetation/Land Use

(possible concerns)
Steam crossings: No stream crossing anticipated, will be crossing only ephemeral drainages.
High erosion potential: No, small cut, up to 0.8' and small fill, up to 4.7', required.
Loss of soil productivity: No, location will be restored after drilling, if nonproductive. If productive unused portion of drillsite will be reclaimed.
Unusually large wellsite: Yes, a large wellsite for this area, 400'X400' location size required.
Damage to improvements: Slight, surface use is a cultivated field.
Conflict with existing land use/values: Slight, surface use is a cultivated field.

Mitigation
__ Avoid improvements (topographic tolerance)
__ Exception location requested
_X_ Stockpile topsoil
__ Stream Crossing Permit (other agency review)
_X_ Reclaim unused part of wellsite if productive
__ Special construction methods to enhance reclamation
__ Other _____

Comments: Will used existing paved county road, Rudyard road and existing section line dirt trail. A short new access road will be built from the short section line dirt road into this location, about 2000' of new access into this location. No special concerns.
_____

Health Hazards/Noise

(possible concerns)
Proximity to public facilities/residences: Residences about ½ of a mile to the southeast, about ¾ of a mile to the northeast, 7/8 of a mile to the northeast and 1.25 miles to the northeast from this location.
Possibility of H2S: Yes, possible from the Mississippian to the Ordovician Formations.
Size of rig/length of drilling time: Small drilling rig 15 to 20 days drilling time.

Mitigation:
_X_ Proper BOP equipment
__ Topographic sound barriers
__ H2S contingency and/or evacuation plan
__ Special equipment/procedures requirements
__ Other:_____

Comments: H2S safety equipment should be on location from the Lodgepole Formation to total depth in the Red River Formation.

Wildlife/recreation

(possible concerns)
Proximity to sensitive wildlife areas (DFWP identified): None identified.
Proximity to recreation sites: None identified.
Creation of new access to wildlife habitat: None identified.
Conflict with game range/refuge management: No
Threatened or endangered Species: Species identified as threatened by the USFWS is the Black-footed Ferret. Species listed as candidate species are the

Greater Sage Grouse and the Sprague's Pipit. NH tracker website for this Township and Range lists zero (0) species of concern.

Mitigation:
__ Avoidance (topographic tolerance/exception)
__ Other agency review (DFWP, federal agencies, DSL)
__ Screening/fencing of pits, drillsite
__ Other:_____
Comments: Private surface cultivated land. There maybe species of concern that maybe impacted by this wellsite. We ask the operator to consult with the surface owner as to what he would like done, if a species of concern is discovered at this location. The Board of Oil & Gas has no jurisdiction over private surface lands.

Historical/Cultural/Paleontological

(possible concerns)
Proximity to known sites None identified
Mitigation
__ avoidance (topographic tolerance, location exception)
__ other agency review (SHPO, DSL, federal agencies)
__ Other:_____
Comments: Private surface cultivated land.. There maybe possible historical/cultural/paleontological sites that maybe impacted by this wellsite. We ask the operator to consult with the surface owner as to his desires to preserve these sites or not, if they are found during construction of the wellsite. The Board of Oil & Gas has no jurisdiction over private surface lands.

Social/Economic

(possible concerns)
__ Substantial effect on tax base
__ Create demand for new governmental services
__ Population increase or relocation
Comments: No concerns. Wildcat well with an existing gas field, Rudyard Gas Field.

Remarks or Special Concerns for this site

Well is a 5400' Red River formation test vertical well test.

Summary: Evaluation of Impacts and Cumulative effects

No long term impacts expected. Some short term impacts will occur, but will be mitigated in time.

I conclude that the approval of the subject Notice of Intent to Drill (does/**does not**) constitute a major action of state government significantly affecting the quality of the human environment, and (does/**does not**) require the preparation of an environmental impact statement.

Prepared by (BOGC): _\s\Steven Sasaki _____
(title:) Chief Field Inspector _____
Date: April 2, 2012 _____ _____ __

Other Persons Contacted:

_____
Montana Bureau of Mines and Geology, GWIC
website. _____
(Name and Agency)
Hill County water wells. _____
(subject discussed)
April 2, 2012 _____
(date)

US Fish and Wildlife, Region 6 website
(Name and Agency)
ENDANGERED, THREATENED, PROPOSED AND CANDIDATE SPECIES
MONTANA COUNTIES, Hill County
(subject discussed)

April 2, 2012 _____
(date)

Montana Natural Heritage Program Website (FWP)
(Name and Agency)
Heritage State Rank= S1, S2, S3, T34N R9E
(subject discussed)

April 2, 2012 _____
(date)

If location was inspected before permit approval:
Inspection date: _____
Inspector: _____
Others present during inspection:_____